

Appl. No.: 10/821,410
Amdt. Dated: 12/14/2005
Off. Act. Dated: 09/14/2005

Amendments to the Drawings:

The attached sheets of drawings include changes to FIG. 5 and FIG 12.

Sheet 5/14, which includes FIG. 5, replaces the original sheet including FIG. 5. In FIG. 5, element 232 was added for the mast top plate (see e.g., paragraph [0082] of the specification).

Sheet 12/14, which includes FIG. 12, replaces the original sheet including FIG. 12. In FIG. 12, the support wire leading to element 422 was corrected from 230 to 234 (see e.g., paragraph [0082] of the specification).

Attachment: Replacement Sheets
Annotated Sheets Showing Changes

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. **Specification.**

(a) Objection. The disclosure was objected to for an incorrect reference numeral in paragraph [0086]. The reference numeral for the “turntable 272” was changed to 270.

(b) Amendments. Several amendments are made to the specification to correct various typographical errors. No new matter has been added.

2. **Claim Objections.**

(a) Claim 1. The phrase “for positioning adjacent a hydraulic feature” has been amended to refer to “the hydraulic feature”.

(b) Claims 5, 13, 21, 25, 26, 28, 31, and 32. The Examiner is of the opinion that the term “essentially” in “the group consisting essentially of” renders the group ambiguous. However, the phrase “consisting essentially of” has a specific meaning when applied to claims. It “limits the scope of a claim to those specified materials or steps ‘and those that do not materially affect the basic and novel characteristic(s)’ of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original)”. MPEP 2111.03. The scope of the claimed sensors is detailed in the specification, and those which do not fall therewithin are excluded. There is no ambiguity in the claim.

(c) Claims 12, 25, and 31. The Examiner is of the opinion that the elements “weather”, “soils”, “sediments”, “volcanic gasses”, and “hydrothermal fluids” are not “characteristics [of a hydraulic feature]”, and, therefore, cannot properly be included in a list of measured “characteristics [of a hydraulic feature]”.

Paragraph [0009] of the specification states that the “primary characteristics to

measure in natural hydraulic features are channel topography, water surface topography, air-water mixing, velocity pressure differentials, and lift and drag forces.” Paragraph [0011] refers to taking measurements of the “fluid mechanics in the study region”.

It is respectfully submitted that it is virtually impossible to obtain an accurate assessment of any of these without a measurement of the characteristics listed in claims 12, 25, and 31. For example, how can an assessment of the channel topography be made without a detailed understanding of the soils and sediments that make up that topography? How can lift and drag forces be estimated without understanding the weather conditions in that area, and how the soils and sediments will react to those weather conditions? How can fluid mechanics be assessed in a meaningful manner without knowledge of any hydrothermal fluids or volcanic gases present in the immediate area? It is precisely the characteristics listed in claims 12, 25, and 31 that determine how the hydraulic feature behaves.

The Examiner further states that the inclusion of the particular characteristics in claims 12, 25, and 31 “makes the claims confusing”. The specification clearly recites all of the same characteristics, and further includes lists of sensors adapted to measure, *inter alia*, these same characteristics. If anything, the list of characteristics makes the relationship between the apparatus and its measurements more clear than it would otherwise be.

3. Claim Amendments.

The claims have been amended in view of the Examiner’s determination of allowable subject matter in the Office Action mailed September 14, 2005.

(a) Claim 1. The allowable subject matter of claim 11, along with the subject matter of claim 7, was added to claim 1. Claims 7 and 11 have been canceled. Thus, claim 1 should now be allowable. Similarly, claims 2-6, 8-10, 12-13 are also allowable.

(b) Claim 14. The allowable subject matter of claim 24 was added to claim 14. Claim 24 has been canceled. Thus, claim 14 should now be allowable. Similarly, claims 15-23 and 25-26 are also allowable.

(c) Claim 27. The allowable subject matter of claim 30 was added to claim 27. Claim 30 has been canceled. Thus, claim 27 should now be allowable. Similarly, claims 28-29 and 31-32 are also allowable.

(d) Claim 33. The allowable subject matter of claim 34 was added to claim 33. Claim 34 has been canceled. Thus, claim 33 should now be allowable.

4. Amendments Made Without Prejudice or Estoppel.

Notwithstanding the amendments made and accompanying traversing remarks provided above, Applicants have made these amendments in order expedite allowance of the currently pending subject matter. However, Applicants do not acquiesce in the original ground for rejection with respect to the original form of these claims. These amendments have been made without any prejudice, waiver, or estoppel, and without forfeiture or dedication to the public, with respect to the original subject matter of the claims as originally filed or in their form immediately preceding these amendments. Applicants reserve the right to pursue the original scope of these claims in the future, such as through continuation practice, for example.

5. Conclusion.

Based on the foregoing, Applicants respectfully request that the various grounds for rejection in the Office Action be reconsidered and withdrawn with respect to the presently amended form of the claims, and that a Notice of Allowance be issued for the present application to pass to issuance.

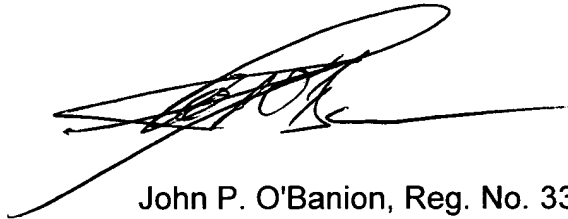
In the event any further matters remain at issue with respect to the present application, Applicants respectfully request that the Examiner please contact the

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undersigned below at the telephone number indicated in order to discuss such matter prior to the next action on the merits of this application.

Date: 12/14/05

Respectfully submitted,

A handwritten signature in black ink, appearing to be "John P. O'Banion", written over a horizontal line.

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Attachment



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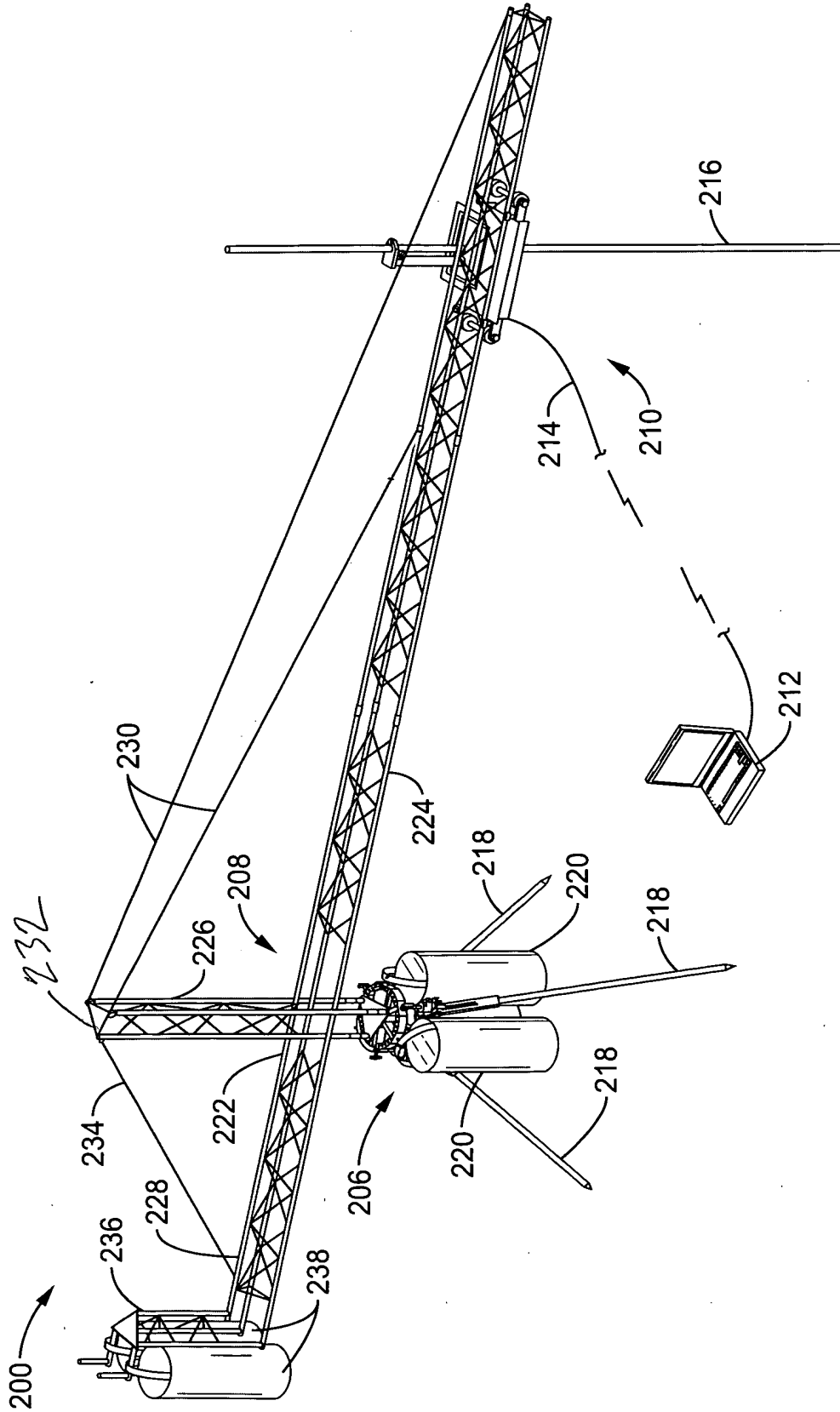


FIG. 5

12/14

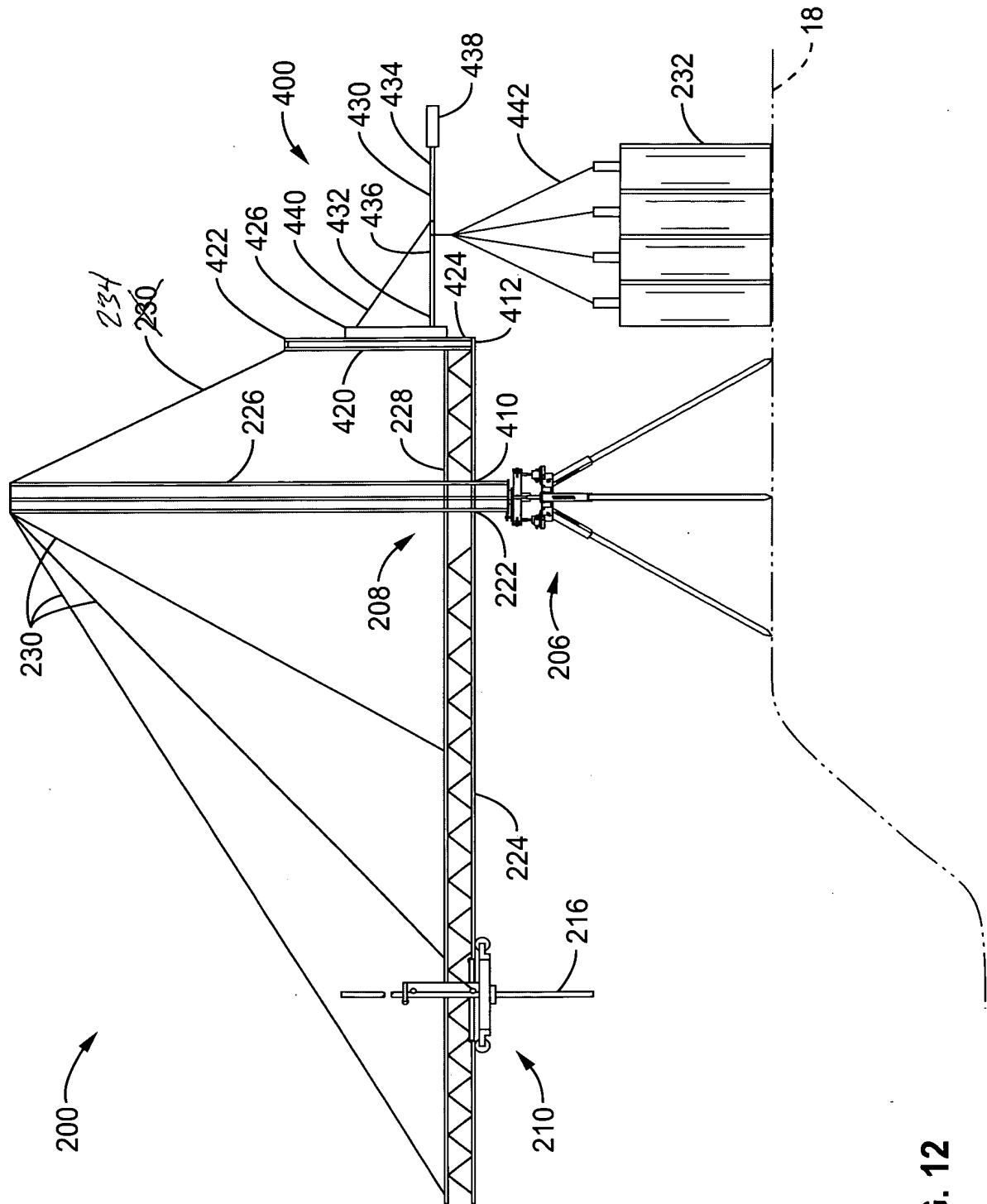


FIG. 12